

Claims:

1. An isolated polynucleotide comprising a polynucleotide sequence which codes without interruption for human ANH401 having the amino acid sequence set forth in SEQ ID NO 2, or a complement thereto.
- 5 2. An isolated human polynucleotide of claim 1, wherein the polynucleotide sequence which codes for human ANH401 has the nucleotide sequence set forth in SEQ ID NO 1.
3. An isolated human ANH401 polynucleotide comprising,
10 polynucleotide sequence having 99% or more sequence identity along its entire length to the polynucleotide sequence set forth in SEQ ID NO 1, which codes without interruption for ANH401, or a complement thereto, and which has NADP binding activity.
- 15 4. An isolated human ANH401 polynucleotide of claim 3 which has dehydrogenase activity.
5. An isolated polynucleotide which is specific for an ANH401 of claim 1 and which codes for a polypeptide comprising amino acids 271-308 of SEQ ID NO 2.
- 20 6. An isolated human ANH401 polypeptide of claim 1 comprising,
the amino acid sequence set forth in SEQ ID NO 2.
7. An isolated polypeptide which is specific for an ANH401 of claim 6 and which codes for a polypeptide comprising amino acids 271-308 of SEQ ID NO 2.
- 25 8. An isolated human ANH401 polypeptide comprising an amino acid sequence having 99% or more sequence identity to the amino acid sequence set forth in SEQ ID NO 2, and which has NADP binding activity.
- 30 9. An isolated human ANH401 polypeptide of claim 8 which has dehydrogenase activity

10. A method of treating a vascular disease or a disease association with vascularization, comprising:

administering to a subject in need thereof a therapeutic agent which is effective for regulating expression of said ANH401 of claim 1.

11. A method of claim 10, wherein said agent is an antibody specific for ANH401.

12. A method of claim 11, wherein said antibody is specific for an epitope of amino acids 303-308 of SEQ ID NO 2.

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13. A method for identifying an agent that modulates the expression of ANH401 in cells capable of forming blood vessels, comprising:

contacting said cells with a test agent under conditions effective for said test agent to modulate the expression of ANH401 of claim 1 in said cells, and
determining whether said test agent modulates said ANH401.

14. A method of claim 13, wherein said agent is an antibody specific for ANH401.

15. A method of determining the angiogenic index of a sample comprising cells, comprising:

assessing, in said sample, the expression level of ANH401 of claim 1, whereby said levels are indicative of the angiogenic index.

16. A method of claim 15, wherein the angiogenic index is assessed by polymerase chain reaction using polynucleotide primers specific for said genes.

17. A method of claim 15, wherein the angiogenic index is assessed by detecting polypeptides coded for by said genes using specific antibodies.

18. A method of regulating angiogenesis in a system comprising cells capable of forming blood vessels, comprising:

administering to said system an effective amount of a modulator of ANH401 polynucleotide of claim 1, or a polypeptide coded thereby, under conditions effective for the modulator to modulate said polypeptide, whereby angiogenesis is regulated.

5 19. A method of claim 18, wherein the modulator is an antibody specific for said polypeptide.

20. A method of claim 18, wherein the antibody is conjugated to a cytotoxic or cytostatic agent.

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21. A method of claim 18, wherein regulating angiogenesis is inhibiting angiogenesis;

22. A method of claim 18, wherein regulating angiogenesis is stimulating angiogenesis;

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23. A method of claim 18, wherein the system is an *in vitro* cell culture or *in vivo*.

24. A method of claim 18, wherein the system is a patient having a cancer, coronary artery disease, myocardial ischemia, or coronary arteriosclerosis. 58

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25. A non-human, transgenic mammal whose genome comprises a functional disruption of ANH401 of claim 1.

26. A method of advertising ANH401 of claim 1 for sale, commercial use, or licensing, comprising,

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displaying in a computer-readable medium a polynucleotide set forth in SEQ ID NO 1, complements thereto, or a polypeptide set forth in SEQ ID NO 2.

27. An antibody which is specific for an epitope coding for amino acids 303-308 of a human ANH401 of claim 8 and which is specific for said ANH401.

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